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Lemaire, Robin H.; Mannak, Remco S.; Ospina, Sonia M.; Groenleer, Martijn

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Striving for State of the Art with Paradigm Interplay and Meta-Synthesis: Purpose-oriented
Network Research Challenges and Good Research Practices as a Way Forward

Robin H. Lemaire, Center for Public Administration & Policy, Virginia Tech

Remco Mannak, Department of Organization Studies, Tilburg University

Sonia Ospina, Wagner Graduate School of Public Service, New York University

Martijn Groenleer, Tilburg Institute of Governance, Tilburg University

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Abstract

With the growing amount and increasing heterogeneity of research on purpose-oriented networks (PONs) in the public sector, it is imperative to find a way to synthesize this research. Drawing on the varied research perspectives on PONs, we advance the idea of paradigm interplay and meta-synthesis as aspirations for the field and argue this is especially key if we want the study of PONs to inform practice. However, we recognize several challenges in the current state of the PON research that prevent the field from making strides in paradigm interplay and meta-synthesis. We discuss six challenges which we consider the most critical: different labels, differences across research foci, variation in measurement, the nestedness of networks, the dynamism of networks, and variation in the network context. We suggest six good research practices that could contribute to overcoming the challenges now so as to make integration of the research field more of a possibility in the future.

Purpose-oriented networks (PONs)¹ are increasing in importance in the public sector. They are often touted as the approach for addressing wicked problems by overcoming the problems of service silos. PONs are defined as “groups of three or more legally autonomous organizations that work together to achieve not only their own goals but also a collective goal” (Provan and Kenis 2008, 231). Mirroring the increasing importance in practice, research on PONs has also flourished over the last two decades (Hu et al. 2015).

This article explores the feasibility of researchers studying PONs to respond to the applied research call to synthesize research findings in a way that helps support and inform practice (Denyer and Transfield 2006; Paterson 2012). We argue that responding to this call is indeed imperative, but doing so entails more challenges than just the common challenges of bridging research and practice. For the research on PONs to inform practice more holistically, what is required is first to address the numerous challenges to synthesizing the current landscape of network research, particularly because of the high level of research heterogeneity that characterizes it.

The increased attention to PON research has not been limited to one group of scholars, one paradigm, or one method. Instead, the attention that has been paid to networks in the field has come from researchers adopting diverse theoretical perspectives, from resource dependency theory (Huang and Provan 2007) to social network theory (Nowell et al., 2018a)); thematic subcategories such as management and performance (Mandell and Keast, 2008); targeting diverse empirical foci, from ego (Chen and Graddy, 2010) to dyadic or triadic (Lemaire and Provan, 2018) or whole level (Segato and Raab, 2019); across many policy areas, emergency

¹ Previous research has referred to these networks as goal-directed (Provan and Kenis 2008) or whole (Provan et al., 2007), but we are using the label purpose-oriented for the reasons explained in the introduction to this symposium.

management (Kupucu and Hu, 2016) to food systems (Koliba et al., 2017); and employing different research methodologies, from quantitative SNA (Bunger and Huang, 2019) to interpretive qualitative research (Saz-Carranza and Ospina, 2011; Dodge et al. forthcoming) and even recently to game theory and simulation (van den Oord et al., 2017).

The heterogeneity represented in the research on PONs is a strength of the field; it means that the research is not dominated by one perspective to the detriment of other ways of understanding this complex and fuzzy way of organizing (Nowell et al., 2018b). At the same time, for the research on PONs to inform practice more comprehensively, we must also braid these threads together through research synthesis. We often talk of standing on the shoulder of giants, but that imagery suggests the tight coupling of research clearly building on previous discoveries. The PON research is too fragmented and diverse to offer a path of shoulders for researchers, much less cliff notes for practitioners. At this point, with the flourishing of the research, it is important to ask the questions “What do we know about purpose-oriented networks” and “What do we not know and therefore, need to examine?” Answering these questions may seem simple, but those answers also involve questions about how we know what we know and how we know what we do not know.

Meta-synthesis is one approach to systematically integrating data or findings from various studies to generate more reliable conclusions. Meta-synthesis entails reviewing case-based and qualitative research, compiling and examining quantitative datasets and/or findings for the purposes of generalization and integration (Cooper, Hedges, and Valentine, 2009). The motivation for this article first began as a call for such meta-synthesis; however, we quickly realized the field was not yet at the point of making integration a possibility. Examining what we know, do not know, and how we know is complicated by the current state of the research.

Thus, this article is guided by the following questions: what are the challenges to synthesizing the current landscape of PON research and what is required to address these challenges? We put forward the aim of meta-synthesis as a way for the field to collectively inform practice. To reach this aim we view paradigm interplay, a respectful conversation between studies using different paradigms, as necessary to leverage the heterogeneity of the research, which we consider a strength of the field. However, there are numerous research challenges that inhibit paradigm interplay and in turn, meta-synthesis. In this article, we focus on six of those challenges and propose research practices to address those challenges as a first step to enabling paradigm interplay and ultimately, meta-synthesis. Figure 1 depicts our argument and how we piece together meta-synthesis, paradigm interplay, research heterogeneity, research challenges, and good research practices.

To be sure, the challenges we highlight are not all encompassing and are not the product of a systematic review of the extant literature. Rather, these specific ideas are the result of the authors' collective deliberation and analysis of and reflection about our knowledge of the PON research domain. Our ideas on the challenges are also supported by structured conversations on the study of public networks with our peers², notably those contributing to the special issue of which this article is part.

<< INSERT FIGURE 1 ABOUT HERE >>

We proceed as follows. We begin by outlining why the aim of meta-synthesis and then why the need for paradigm interplay. We subsequently identify six challenges that we see as most critical to PON research: different labels, differences across research foci, variation in

² The first draft of this article was written for the purposes of discussing research methods at the Barcelona workshop described in the introduction to this symposium; thus these challenges were presented for discussion with the workshop participants.

measurements, the nestedness of networks, the dynamism of networks, and variation in the network context. For each challenge, we suggest “good” research practices to mitigate the barriers these research challenges create for paradigm interplay and/or meta-synthesis.

“Good” research practices are often characterized in terms of integrity and rigor. Without denying the importance of the former, in this study we mainly focus on the latter. While one can interpret integrity in terms of how the study is executed, rigor refers more specifically to the methods and the soundness in the planning, conducting and reporting of the study. Traditionally rigor is considered as “the accurate and systematic application of theory and method” (Dodge, Ospina, and Foldy, 2005: 288). Good practices as proposed in this article involve making explicit and reflecting on concept definition, epistemological assumptions, measurement, level of analysis, underlying time dimension, and context. Such practices facilitate well-founded comparison between studies, enable paradigm interplay, and have the potential to mitigate the barriers to meta-synthesis. These practices, focused on establishing collective rigor in the PON research, are proposed as a way to begin to overcome the challenges we have identified so as to make meta-synthesis, and hence integration of the research field to inform practice more of a possibility in the future.

Meta-Synthesis

The number of attempts to review the PON literature over the years (Berry et al., 2004; Isett et al., 2011; Lecy, Mergel, and Schmitz, 2014) is a testament to the unwieldy landscape of the field. These reviews are assets for moving forward our understanding of PONs in theory and practice; but they are a necessary, not sufficient step in the right direction. The heterogeneity of the research on PONs still thwarts researcher attempts to build on and extend previous work. Moreover, a lack of clarity about how to interpret findings impedes the ability of practitioners to

utilize them in their practice. At this point, with the increasing use of PONs in practice and the flourishing of the research, yet given an immature and fragmented field, it is important to go beyond mere reviewing and strive for integration of insights from research.

As the term “networks” is a broad concept, it may be unrealistic to synthesize the empirical research on networks in the public sector. But even when we limit the scope to PONs, it is difficult to synthesize all the relevant empirical research to get a sense of how the various research studies build off one another and provide answers about what we know and do not know. The synthesis challenge is not one unique to the study of PONs, but the need for greater synthesis is especially imperative for the study of this phenomenon for several reasons. First, since most studies on PONs only examine one or a small number of networks, it is difficult to explore or test theories across a range of network cases. Generalizability of individual studies is restricted, but calling for more large-N studies may not be a feasible solution because of the resources necessary to do this type of study of PONs (i.e. where each case could include 50+ organizations and even more individuals). Instead, synthesis of individual studies would allow for assessing the generalizability of findings and moving forward the collective knowledge and theory about PONs.

While previous reviews of research on networks in the public sector represent helpful guides for future research, systematic synthesizing strategies in applied research can help reach new levels of understanding that support and inform practice (Denyer and Tranfield 2006; Hannes and Lockwood 2011). One well-known approach is meta-synthesis. Driven by “a user-led agenda” (Denyer and Tranfield 2006: 222), this approach is suitable in applied fields characterized by high research heterogeneity, and allows for the inclusion of quantitative, qualitative, and theoretical contributions (Denyer and Tranfield 2006).

Meta-synthesis concerns reviewing case-based and qualitative research, compiling and examining quantitative datasets and/or findings for the purposes of generalization and integration (Cooper, Hedges, and Valentine, 2009). We choose meta-synthesis over meta-analysis, which combines data from quantitative studies on the same topic to reach general conclusions for predicting the likelihood of success in studied interventions, because the original notion of meta-analysis requires a statistical analysis of the data. The broader term of meta-synthesis encompasses integrating qualitative data as well, and it is done through methods other than statistical analysis alone. We also recognize the importance of network context for advancing collective knowledge, as well as the value that comes from examining networks through the lenses of different paradigms. Thus, our use of the term meta-synthesis is intended to denote an inclusive and integrative approach.

Unlike traditional literature reviews, systematic review approaches such as meta-synthesis require the application of principles and rules (Denyer and Tranfield 2006; Paterson, 2012). When engaging in the synthesizing exercise, we experienced that the network research landscape is not ready for the application of such principles and rules. Hence, the purpose of this article revolves around identifying and clarifying the challenges of attempting to engage in integration. Moreover, beyond identifying and clarifying challenges, we aim to find possible ways to overcome these challenges while maintaining the valuable heterogeneity of the field.

Research Heterogeneity and the Need for Paradigm Interplay

The study of networks emerged from a number of disciplines, including sociology, anthropology, mathematics, psychology, political science, and economics (see Borgatti et al. 2009 for a review of its history). With roots in so many disciplines, it is not surprising that the study of networks in public management takes many approaches. Some scholars work within a

post-positivist epistemology, whereby networks are considered social phenomena to be studied from the outside-in (identifying and measuring observable indicators); using deductive approaches to test hypothesis and doing so with the use of variance models of inquiry. Quantitative network analysis and modeling is the likely choice, perhaps complemented with some interview studies. Other scholars may work within an interpretive epistemology, whereby networks are viewed as socially constructed phenomena to be studied from the inside-out (from the perspective of its actors); using inductive and abductive approaches to theorize from the data, and doing so with the use of process and practice models of inquiry. Qualitative, interpretive methodologies, which may include variations of ethnography, narrative or phenomenological studies are the likely choice, perhaps complemented with some descriptive quantitative statistics. And then of course there are other scholars that may choose something in between these two sides of the epistemological continuum (Clarke, 2009; Ospina, Esteve & Lee, 2018).

The resulting perspectives from different paradigms represent equally legitimate approaches to study the phenomenon of networks and we take the position that the field is better off when all perspectives are used to advance the field. Efforts at meta-synthesis must recognize the many theoretical perspectives scholars of PONs take when studying them, rather than starting from a single paradigm. This requires that network scholars have clarity about their own positions and at the same time understand how they differ from those of other scholars. This awareness demands considering diverse positions as equally worthy of respect.

We advance the idea of multi-paradigmatic interplay (Romani et al. 2011) as a way to strengthen the field and our understanding of the phenomenon. However, to strengthen the field by synthesizing across these various perspectives, paradigm interplay requires that we understand the interplay well and simultaneously consider the assumptions, designs and insights

of multiple perspectives without trying to eliminate what makes each unique. Each perspective offers advantages as well as limitations and blind spots in terms of what we can learn about PONs. Yet, there is a risk that scholars who espouse different perspectives do not sufficiently understand each other and this may prevent scholars across the different perspectives from recognizing various contributions as legitimate. They may also consider that the assumptions in each perspective represent different paradigms that are incommensurable, and thus do not view synthesis of the two as possible, and ultimately fail to learn from one another.

Diverse views, research methods, and foundational assumptions can complement one another if allowed to interact in an open, multi-paradigmatic conversation, leading to a greater understanding than either perspective can yield on its own. How do we handle, though, the different theoretical perspectives and the resulting methodological variations in order to synthesize the findings from these different approaches without misinterpreting or de-valuing differences? The goal is not to reach a consensus, but to facilitate dialogue across perspectives, to allow each to shed its unique light on the other and on the field (Uhl-Bien and Ospina, 2012). Any attempts at meta-synthesis would need to allow this dialogue to occur by examining where there is consensus and where there is not and why. This dialogue will require clarity about the foundational assumptions and choices underlying different research perspectives and a willingness to engage others' perspectives and assumptions to understand how these differences influence findings. To engage others' perspectives and facilitate dialogue across them, in turn, requires more clarity around the assumptions and choices we make in conducting our research.

Research Challenges and Suggested Practices

On the basis of our familiarity with the PON research domain and discussions and reflections amongst ourselves and with other scholars working in this domain, we identify six

challenges to paradigm interplay and greater synthesis of the PON research. These are challenges that stem from the different labels used in the literature, the different research foci, the variation in measurement, as well as the nestedness, dynamics and context of networks. We discuss how we see each of these to be challenges to paradigm interplay and future aspirations of meta-synthesis of the empirical research on PONs. We then offer “good” research practices as a first step to paving the way toward future synthesis. These practices are focused on establishing rigor in the conducting and reporting of research to enable systematic integration for the purpose of informing practice.

Defining the Relevant Literature Because of Different Labels

This first challenge is twofold: different labels and different meanings. First, the use of different labels associated with PONs frustrates a structured and efficient literature search as it is impossible to define adequate search terms. Second, different studies give substantively different meanings to the same concepts used to study PONs, which frustrates a substantive comparison of these studies.

The first challenge arises from the prevalence of collaborative arrangements to achieve a greater community level outcome, which has resulted in several areas of research across disciplines related to PONs. These collaborative arrangements are labeled differently though. The many labels present a challenge to synthesizing the research on a number of fronts. First, the term network is very broad and, thus, has to be further specified. Restricting the research to the study of interorganizational networks still encompasses quite a breadth of research. A quick Web of Knowledge subject term search for interorganizational networks results in close to 700 hits, some of which are relevant to PONs and many of which are not.

On the other hand, limiting the relevant research to only “purpose-oriented networks”

excludes a great deal of literature that may be relevant, but which uses a different label for describing the phenomenon. The definition of PONs is similar to how some define collaborative governance, a label commonly used in the public administration and political science literature, as well as the new emerging area of study in these fields, meta-governance (Kooiman and Jentoft, 2009). Another label commonly found in other fields is collaboration, and collective impact (Kania and Kramer, 2011) is the new buzz word in the field of nonprofits. Some studies of interorganizational networks, collaborative governance, meta-governance, collaboration and collective impact examine networks that fit the definition of PONs, but not all of them do. For example, some studies are an examination of networks where it is unclear whether “purpose-oriented” is fitting (Scheinert et al., 2015), whereas with other studies the focus is on one central participant within the purpose-oriented network (McGuire and Silvia, 2010). Often times, especially in the case of collaboration, it is not clear whether the studied phenomenon is a collective of more than two organizations and if so, if there is an underlying collective purpose.

Regardless of whether the phenomenon being studied fits the definition of PONs, the collaboration research is often relevant to the study of PONs. For instance, many PON scholars cite the work of collaboration scholars, like the work of Huxham and Vangen (2000). Although this work focuses on collaboration processes, the findings from those studies are relevant to understanding PONs. And the reverse is also true, many findings from the studies of PONs can inform understanding of collaboration, collaborative governance, meta-governance, and collective impact. Teasing out the relevant resources is time-consuming, though, as a quick Web of Knowledge subject terms search using collaborative governance, or collaboration, or meta-governance, or collective impact yields over 160,000 results. Therefore, sifting through all these streams of literature and finding the research relevant to PONs is a difficult and time-consuming

task.

A related impediment is also the various labels used to study specific dimensions of networks. A meta-synthesis of all the purpose-oriented network research must focus on different dimensions of PONs, which would include structure, processes, governance, management, leadership, performance, and outcomes. However, often not clear as well is how different scholars use these terms and how they differ from other terms. One example –not specific to the PONs literature, but plagues it as well as the literature on organizations– is the difference between management and leadership. It is often not clear why one scholar classifies their study as management over leadership or vice-versa, and at times the two are used almost interchangeably. For instance, Agranoff and McGuire (2001) propose a network management framework based on four activities; which McGuire and Silvia (2009) then use to examine “leadership” in their study of the effectiveness of emergency management networks. Another example, more unique to the study of PONs, is governance. Network governance is a prevalent thread of research, but some scholars refer to the idea of governance by network and others to how a network itself is governed (see Vangen, Hayes, and Cornforth, 2015 for an attempt to synthesize the two).

These are only two examples, but many could be offered for each dimension of PONs. Combining these two definitional challenges means that the first step of identifying what research to include in a meta-synthesis, much less how to synthesize it, is already a daunting challenge. To pave the way for future synthesis, and in the meantime create more dialogue across these research areas, we can learn from the purpose-oriented network approach in practice and work to break down the silos created in the literature around different labels.

The first good research practice we propose is also twofold, like the challenge itself.

First, literature searches should employ a range of terms with the goal of capturing different pockets of research that may be relevant despite the label that may be used. Because the choice of label may have more to do with a researcher's discipline or scholarly roots than with the phenomenon necessarily being studied, we can avoid fortifying unnecessary silos by being more inclusive of various labels in our searches and our discussions. We can do this by not stopping at labels and instead considering the many different labels or keywords that might be applicable to the phenomenon being studied. We can also facilitate this broader literature search and synthesize across labels by better defining the phenomenon and concepts we are studying. Though it may seem that a call for better defining would strengthen the silos, we believe that explicitly defining phenomena and concepts would provide more understanding among researchers of where the similarities or differences are in regard to the phenomena or concepts being examined. For instance, by clearly defining what type of network one is studying or what lens the researcher is employing for the study, that information can be used to ascertain whether that study's findings are relevant to the research on PONs. Specifically, we call for authors to describe the network or collaborative arrangement they are studying, provide a definition for the label they are using (preferably in the introduction section) and explain why their particular cases fit that label. In addition to defining labels used to represent the collaborative arrangement, we also call for authors to provide definitions for all of the major concepts important to that study, whether that be management, governance, structure, leadership, process, performance, etc. Providing definitions to explain our intended meaning behind labels would yield bridges amongst which dialogue could flow between silos and ultimately clarify terms and their differences for systematic integration.

Different Research Foci

In addition to different labels, researchers work from different epistemological

assumptions. There are challenges to synthesizing across an articulated research problem unless we acknowledge the paradigmatic fit between the problem, the chosen theoretical perspective and research question, and the appropriate methodology. At the core of network research are dimensions like structure, process, governance, management, leadership, performance, outcomes, and each of these may be better conceptualized within a different theoretical perspective and research method. For example, traditional network analysis has focused on understanding the structure of the network, which is important as the fundamental architecture from which all other dimensions are constituted. Yet, processes, governance mechanisms, leadership at the network level, the extent to which the network is working (performance) and the outcomes it produces, represent important dimensions if we are to take a systemic and holistic approach.

However, each dimension may be better approached from a different theoretical perspective, depending on the underlying assumptions related to the research question. For example, studying decision-making may be better accomplished using theoretical perspectives focusing on process rather than on variance if within a post-positivist paradigm; or using practice or narrative perspectives if within an interpretive paradigm, to capture the meaning-making experience of the actors involved over time. For instance, in studying partnerships Skelcher, Mathur, and Smith (2005) use a comparative case study design to examine the rules, norms and discourses that shape networks and the tension between democratic guidance and effective service delivery.

At first glance, an easy solution would be to call for more mixed methods research. More mixed methods research would add value to the PON research; however, mixed methods research has not reached the state of the art yet either. As Hendren, Luo, and Pandey (2018)

found in an examination of mixed method research in public administration, the quantitative perspective dominates and most studies fail to integrate the quantitative and qualitative methods. They also note that few studies discuss the philosophical underpinnings of the methods. This last point is especially important as mixing quantitative and qualitative does not mean the mixing of epistemological perspectives, like mixing post-positivist and interpretive paradigm approaches. The challenges of integrating across epistemologies may be too great for individual research studies; thus, rendering integration via meta-synthesis imperative. However, a meta-synthesis would need to consider insights within the context of the perspective from which the study has been done, as this is information that can help illuminate convergence and divergence of findings.

Therefore, the second good research practice we suggest is to be more explicit about the epistemological assumptions underlying our research perspectives and the advantages and limitations of those perspectives. The challenges we have identified above do not so much result from the differences in conceptualizations and operationalizations, or the different theoretical perspectives and methodological approaches taken by network scholars; they follow from a lack of clarification and justification of the way research is being carried out. We call for authors to be transparent and explicit about their epistemological approach and assumptions. To be more explicit in this regard, we encourage authors to be reflective about the alignment of theoretical perspectives, research questions, and methodologies and recognize the limitations as well as the contributions of certain approaches to the study of certain research problems. Transparency and reflection on these choices will allow for greater recognition of the limitations and contributions that different approaches make to the study of similar phenomena and pave the way for paradigm interplay and ultimately, integration through meta-synthesis.

Variation in Measurement

As discussed above, different methodological approaches are used to study PONs. We view this as a strength of the literature, but challenges do exist in synthesizing the findings from these different methodological approaches, if their connection to diverse paradigms is not explicitly acknowledged. For example, when narrative scholars committed to an interpretive paradigm use language and text to capture inter-subjective experiences of network participants, these are strong tools to “access their reality” (rather than measure it). Despite the different approach in comparison with the approach Social Network Analysis (SNA) scholars committed to a post-positive paradigm would make, when finding “objective” measures to capture structural properties of the network, the two approaches together offer valuable ways of approaching the “reality” of the network. Understanding what “reality” or “objective” means in each of these approaches is necessary to understand how to synthesize the two.

Challenges also exist, though, in synthesizing research that uses the same methodology, often times due to variation in measurement or unit of observation. One example of this is evident when using SNA. Within this methodology, how different scholars measure inter-organizational relationships can vary greatly, making clear specification of basics such as node and tie necessary (Ahuja, Soda, and Zaheer 2012). Another example is how the data on relationships were collected. There are two broad approaches to collecting data on relationships, the roster versus free-recall (or name generator) methods. If one study examines network structure based on data collected via the roster method is that comparable to structure based on the free-recall method?

Even if studies utilize the same method, are they necessarily measuring the same types of relationships? For instance, consider two studies using the roster method and examining network

level measures like centralization and density. One study examines information sharing ties and the other examines referrals. The findings regarding centralization and density of these studies may not necessarily be interpreted in the same way. Even if the same type of interaction is studied, how that interaction is defined may differ. Information exchange is a common type of interaction studied in PONs, but operationalizations of what is considered to be information and what constitutes exchange can be drastically different.

Variations in other regards also exist, such as how researchers may select the unit of observation. For example, consider researchers examining leadership in networks. Whereas traditional leadership studies define leadership as an individual occupying a formal position or consider a leader's trait and style, other studies use the broader conception of leadership. One example is the definition proposed by Huxham and Vangen (2000), which include structures and processes in their operationalization of leadership. As relational leadership scholars have become more interested in the nature of leadership in networks, the unitary leadership approach is giving way to more collective understandings of leadership in these contexts (Currie, Grubnic, and Hodges 2011; Ospina, 2017), but this is still not sufficiently recognized in network research. Indeed, network scholars often do not make a clear distinction between leadership and management activities, as a result of which measures of leadership become blurred with those of management. Again, the findings regarding leadership may not be interpreted in the same way.

Performing meta-synthesis on studies that do not acknowledge the key distinctions they bring to their research, in terms of paradigms, methodologies, units of observations and measures represents a very hard task. The point is not to ask researchers to make their studies similar in these dimensions, but to make their choices more explicit in order for the meta-synthesis to be possible. This will also make it possible to highlight in the meta-synthesis the contribution of

different research perspectives, thus reflecting the complex reality under study.

Thus, the third good research practice we propose is to be more precise in publications on the descriptions of measurement so as to better understand how measurement could be a factor in explaining differences in findings. Whether it is in an appendix or in the main text, readers should be provided with the details about how each of the variables or concepts are operationalized or measured and observed. A common but rarely followed research principle is that enough detail should be provided so that the study could be replicated. This level of detail is necessary not only with regard to information about quantitative measures, but also with regard to how concepts are operationalized. If the study is within the interpretive paradigm, we would aim for ensuring sufficient detail about the path from observations to analysis to interpretations to ensure transparency and clarity (Ospina, Esteve, and Lee 2018.) In the short-term, implementing this practice could encourage building on each other's work by using similar measures if applicable. If similar methods and measures are used to study different networks, then we can begin to compile evidence on commonalities across networks or how context may intervene. In the long-term, this practice would allow for meta-synthesis by integrating findings based on similar operationalizations or analyzing how different findings may result from different operationalizations or measurements.

Nestedness of Networks and Cross-level Analysis

A related complexity for synthesizing the research on PONs is that these networks are per definition a stratified or layered phenomenon. Though the idea of a purpose-oriented network is of organizations working together, oftentimes their inter-organizational relations are actually formed by individuals representing their organizations. The individuals and their relationships are in turn at least partially affected by their membership in sub-networks or clusters within the

wider network (Brass et al. 2004; Moliterno and Mahony, 2011) and vice versa. In addition, these individuals and organizations are at the same time embedded in multiple other networks (Rethemeyer and Hatmaker, 2008), which may or may not overlap with the network being studied. In turn, even most PONs do not have clear boundaries (Nowell et al. 2018b) and the boundaries imposed are often an artifact of the research.

In order to inform practice properly, developing a full understanding of the functioning of PONs requires examining the multiple levels simultaneously and the effects each level has on another. Those cross-level effects may run the gamut and possibilities, including how relationship structure at one level affects relationships at another; how lower (individual/organization) level heterogeneity influences perceptions about higher (network) level functioning and outcomes (e.g. Jeffares and Skelcher 2011; Moretti and Zirpoli 2016); or how higher level narratives affect lower level structural relationships. There are, though, at most a handful of studies that examine cross-level interactions in networks in general (Berends, van Burg, and van Raaij 2011; Moliterno and Mahony 2011; Raab, Lemaire and Provan, 2013). It would be easy to call for more cross-level studies, but the data collection requirements and the lack of theoretical underpinning to guide those studies present real challenges to researchers.

More cross-level studies would also not integrate the distinctive potential of different epistemological standpoints. For instance, post-positive modeling techniques are particularly suitable for testing effects of one level predictors on outcomes at another level. Interpretative approaches, on the other hand, can reveal how perceptions, narratives, or processes at one level inform understanding of outcomes at another level.

The stratification of PONs hinders integration, because studies at different levels are often rooted in different epistemologies and use different research methods; e.g. single case or

comparative case study at the network level, statistical analysis at the organizational level, and narrative inquiry at the individual level. This diversity of approaches is also a strength in itself. Jacobs (2010), for example, uses narrative inquiry with individuals working in partnerships, revealing complexities that would not have surfaced by research at the organizational level. “Rather than confine the discussion to issues of success and failure, the study foregrounds the subjective accounts of individuals who work within partnership and the constraints they encounter.” (Jacobs, 2010, p. 928). This also suggests that paradigm interplay is necessary to integrating across approaches in order to integrate across levels through meta-synthesis.

Without an understanding of whether and how cross-level interactions influence findings in individual studies, synthesizing across studies may mislead interpretation of findings, especially when findings diverge. Using the full potential of the diversity of approaches at different network levels requires some good research practices. Though there could be great value in synthesizing studies that examine different levels, assumptions would have to be made about whether and how the findings can be connected. The fourth good research practice we propose, therefore, is being more explicit about the level of observation and being more thoughtful in considering the appropriate level of analysis for the study of certain dimensions of PONs. Providing clarity about levels upfront allows for easier comparison across studies. Also, future integration could be facilitated if authors reason through how their findings may be influenced by other possible levels of analysis. This reflection and reasoning on levels would facilitate dialogue between the different paradigms for developing a more complete picture of the functioning of PONs at multiple levels.

The Dynamic Nature of Networks

PONs face a continuous tension between stability and flexibility (Provan and Kenis,

2008). On the one hand, demands exist for stability in order to learn about partners' trustworthiness, relational opportunities and to develop transactive memory; on the other hand, demands for flexibility and renewal represent a proposed advantage of the network approach over the bureaucratic approach. For that reason, several scholars have called for time-sensitive network theories (e.g., Ahuja, Soda and Zaheer, 2012; Isett et al. 2011; Zaheer, Albert and Zaheer, 1999), but only a few studies on PONs explicitly include a time-dimension (e.g., Raab, Mannak and Cambré, 2015; Saz-Carranza, Longo Martínez, and Salvador Iborra, 2014).

The dynamic nature of networks challenges efforts to integrate the research on PONs, because it is difficult for static research to capture the ebb and flow. With the comings and goings of people and organizations in and out of networks over time, it can be difficult to isolate real changes in networks over time from changes due to data collection methods and response biases (see Lemaire et al. 2017 and Mercken et al. 2015 for discussions on challenges with longitudinal network analysis). The potential inconsistencies between studies, e.g. studies using different time windows for measuring the same network phenomenon, complicate synthesis. For example, studies on the consequences of network centralization might require a time-window of several years to identify the extent to which an institutionalized core agent might provide collective benefits to the network, mainly coordination benefits, while studies with a short time-window might mainly identify the short-term information advantages for the core agent itself.

An additional important consideration is that different research methods and perspectives can generate substantively different insights into the dynamic nature of networks. Whereas SNA allows for studying snapshots of the network structure over multiple years, interpretive methodologies, like ethnographic research or narrative inquiry, can provide insight in the underlying social processes and dynamics that can explain any changes in network structure over

time. Berthod, Grothe-Hammer and Sydow (2017) discuss how to combine SNA with ethnography and propose the value of conjoining the two for examining research questions specific to the study of PONs.

A consistent approach toward studying the dynamic nature of networks is key for the ability to synthesize the research on PONs. A potential mismatch between time windows used for observation and measurement, and the actual duration of the substantive processes (Zaheer, Albert, and Zaheer, 1999) might be detrimental to understanding how PONs function. Comparisons that fail to consider the relationship between the time window of the study and the findings could lead to flawed conclusions at the meta-synthesis level.

Accordingly, the fifth good research practice we propose is being mindful of the time dimension and considering the appropriate temporal perspective necessary to examine a research question. We recommend that authors be explicit about the temporal dimensions of their study, both in regard to data collection and the networks being studied, so as to allow comparison of findings while accounting for how time might explain where there are convergence and divergence. We encourage researchers to reflect on how the time window for when the study was carried out may influence the findings. We also urge researchers to identify the time window in relation to the temporal timeline of the networks being studied. This last suggestion means providing details about the stage of development of the network itself. Providing information on stage of development upfront allows for synthesis that considers how convergence and divergence of findings may be due to the temporal stage of the network as well as the temporal window of the research. This last suggestion on the temporal stage of the network is related to the final challenge that we identify, the network context.

Network Context

The final challenge we consider is related to how varied the contexts of different networks are. The need to consider variation of network types is already evident in the literature as often times a distinction is made between policy networks, governance networks and service delivery networks. In addition to this distinction, the purpose or context behind the network may be an important factor to consider in synthesizing across research studies.

For instance, there is currently a debate in the literature on emergency management networks as to whether centralization is necessary for effective network functioning. Some scholars argue that centralization is necessary (Moynihan, 2009), consistent with the findings on mental health networks (Provan and Milward, 1995); whereas other scholars find evidence suggesting that centralized emergency response networks are not effective (Marcum, Bevc, and Butts 2012). Yet other scholars adopt a more nuanced stance. For example, in the case of the EU, Boin, Busuioc, and Groenleer (2014) conclude that the current network model is a logical outcome of the punctuated and fragmentary process through which crisis management capacities have been created. They also note, however, that the shortcomings of this model may necessitate elements of a lead-agency model, leading to a hybrid model that is uniquely suited for the peculiar organizational and political creature that the EU is. Whether their recommendations translate back to the local emergency response in the US context, which is the context for both the studies by Moynihan and Marcum et al., is uncertain. The challenge, therefore, is how to interpret these different findings at a meta-synthesis level when implicit contextual factors may be a key factor.

In addition to the purpose or context behind the network, how PONs are bounded for studying may also influence findings. As Rethemeyer and Hatmaker (2008) have shown, service delivery networks are often nested in policy networks and analyzing these overlapping networks

independently is as flawed as analyzing organizations as closed systems. But bounding a network is often necessary for research and how to bound a network is a challenge even for formal PONs. The way a researcher chooses to bound a network will more than likely influence findings, since it is often times difficult to know how findings might be different if the perspectives of actors not involved in the network were captured. Key to a meta-synthesis would be considering how approaches to bounding networks, and trade-offs made in the process, for individual studies may explain convergence or divergence of findings across studies.

Thus, our last good research practice is to provide detail about the context of the PONs being studied. We must pay more attention to the treatment of context in studies of PONs so that we can use paradigm interplay to mutually enrich our understanding of the relationship between context and PONs. This would help to ultimately synthesize findings by accounting for how context may explain divergence. For example, in interpretivist studies, rather than a separate factor, context is assumed to be inherently relevant to understand the various dimensions of the social phenomenon under study. It is presupposed that context and networks shape one another (if such a clear distinction can be made at all), and the researcher explores how the particularities of the context help understand the network dimensions of interest –structure, process, governance, leadership, outcomes and so on – to tease out the mechanisms by which these emerge. This perspective contrasts with post-positive studies drawing on variance theories, but highlights how important context is as a factor. Post-positive studies can be more descriptive in regard to network context and attempt to capture how context may be a variable to consider. Specifically, we recommend that details of the network to be provided by the researcher, if known, are the task domain(s) of the network, its coordination structure, governance form, how and why it was convened, and how long it has been in existence. In addition, other details about

the context it is embedded in - geographical, political, historical, etc.- may be important for interpreting findings across studies. Keeping the theoretical perspective and methodology constant, or at least accounted for, future attempts at meta-synthesis thus can examine questions on whether different network contexts and tasks influence findings.

Conclusion

In this article, we asked what the challenges are to synthesizing the current landscape of network research, notably the study of PONs, and what is required to address these challenges. After discussing barriers to meta-synthesis of the PONs research, we conclude that it is unrealistic to propose meta-synthesis before these challenges are addressed. However, to truly strive for state of the art, more synthesis of the existing research is needed. Given the trade-offs that are often necessary with research, and which are especially a factor with the complexity involved in studying PONs, the field will continue to be plagued with sacrificing depth versus breadth or vice versa. Efforts to incorporate different theoretical perspectives or multiple levels of analysis will come at a cost to generalizing across network context. Efforts to generalize across network contexts or over time will come at a cost to the inclusion of different theoretical perspectives, methodologies or levels of analysis. Therefore, if meta-synthesis is to be an aspiration, because it offers a way to advance the field by leveraging the research that is being done by individual studies, then addressing the challenges to this aspiration is a first and important step. We believe that the way to reach the aim of meta-synthesis is through paradigm interplay, but both paradigm interplay and meta-synthesis require greater transparency of epistemological assumptions and consistency in how the choices researchers make in the research process are reported.

We put forward that ideas about paradigm interplay could help in creating the conditions

for future meta-synthesis, as an important step to advance the field's capacity to generate knowledge that ultimately is also more actionable for practitioners. We argue that the field is better off when all perspectives are used in a complementary fashion, on the basis of an open, multi-paradigmatic conversation. Our call for consistency with epistemological assumptions on the one hand, and paradigm interplay on the other hand, may seem to contradict one another because strict consistency in terminology and methodology within one paradigm might constrain interplay between paradigms. However, we are not calling for epistemological rigidity, but for clarity around the assumptions and choices we make, striving for multi-paradigmatic dialogue. We believe that transparency in the perspectives we take and the methodological choices we make are essential for enabling dialogue, mutual learning and cross-pollination between research rooted in different epistemological perspectives. Although we do not aim for consensus per se, we believe such paradigm interplay is needed for furthering integration of our field of research. And to reach that point, the first necessary step is to overcome the six challenges that we discussed in this article.

In view of enabling paradigm interplay and perhaps future meta-synthesis, we suggested several ways to improve our research so as to begin to address the challenges identified above. We proposed six good research practices as a way to lay the groundwork for future synthesis of the research. Table 1 summarizes these practices along with the challenges they are intended to address. Perhaps meta-synthesis may not be a possibility as of yet, but if we work to better overcome some of the challenges as suggested, we as scholars will have a better sense of how to integrate our own research with that of other scholars. In addition, more dialogue will be possible across studies and ultimately that can lead to a better understanding of how we as a collective can advance the field's understanding of PONs, and bring the practice of such networks further.

<<Insert Table 1 about here>>

As indicated earlier, the identified challenges and proposed practices are not intended to be all encompassing. Rather, they are intended as a first step in striving for the state-of-the-art research that can inform and support practice. We value and respect the quality and the heterogeneity of the flourishing research on PONs and our purpose here was not to critique the current state of research. Instead, our goal was to broaden the lens to incorporate a more collective and ambitious end goal to ensure that the way we, as individual scholars, are approaching our research now, paves the way for a field that can learn from itself. In summary, our call is for greater reflection on how we conduct our research and greater transparency in communication to the field about the choices and trade-offs we make. This call is not only applicable to the PONs literature, but we embed it in a discussion of meta-synthesis of the PONs literature to show how these small efforts now are important for striving for state of the art in the future.

We do, however, recognize the hurdles to implementing these changes given major impediments because of a strong focus on “new” studies and the restrictions imposed by journals, like manuscript word limits. What may, therefore, need to change is not individual researchers, but broader components of the field, such as journals and what details are expected of any published manuscript - whether it be in the published manuscript or as an online only addendum. Changing these expectations may not make a difference when considering the contributions of individual publications, but may be what allows for or hinders the field moving to the stage of meta-synthesis and building collective knowledge that can guide practitioners.

PONs are touted as a way to collectively affect change at the system level. Only by approaching the research of PONs in the same systemic way will we be able to inform how to reach those aims.

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Figure 1. The path to Meta-Synthesis

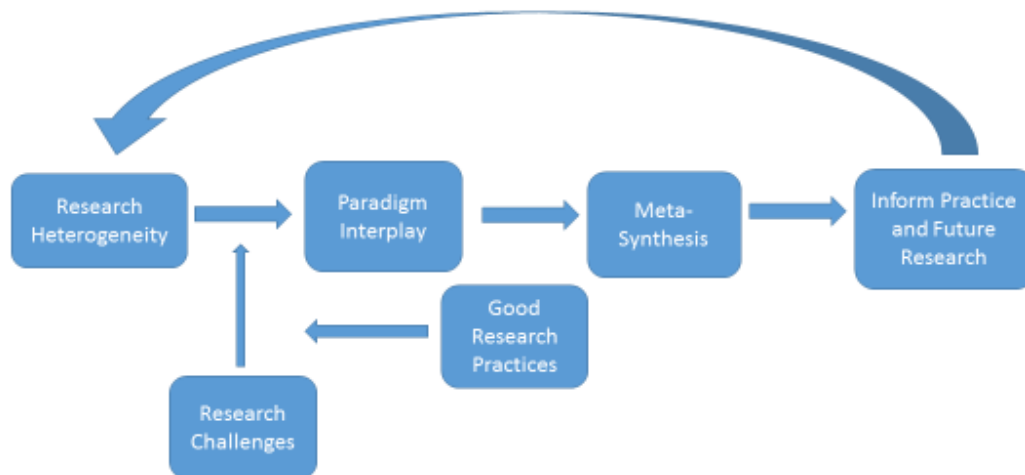


Table 1. The ‘Good’ Research Practices Proposed to Address Challenges to Future Synthesis

Challenge	“Good” Research Practices
Different labels	Not limit literature search to labels and explicitly define key concepts and the reason for using certain labels (i.e. network, collaborative governance, collaboration, management, governance, etc...).
Differences across research foci	Be more explicit about epistemological assumptions and reflect on advantages & limitations of chosen research approach and methodology.
Variation in measurement	More precise descriptions of measures and alignment of operationalizations and measures with other research. More reporting transparency in the observations-analysis-interpretation path in interpretive research.
Nestedness of networks	More explicit about level of analysis and level of observation. More reflection on level of analysis and the potential influence on findings.
Network dynamism	More mindful of time dimension and chosen methodologies. More reflection on how the time dimension or temporal perspective may influence findings.
Variation in network context	Capitalize on the context-sensitivity of interpretive studies. More descriptive with context, capture context variables/conditions.